Massachusetts Riverways Program

2004 Annual Summary

The Riverways Program

Mission: To promote the restoration, protection and ecological integrity of the Commonwealth's rivers, streams and adjacent lands.

All the Riverways Programs are based on the belief that local action is the key to river protection. Riverways' staff works side by side with local citizens, town officials, watershed-based groups and other partners to restore and protect the state's riverine ecosystems. The Riverways Program offers training, technical assistance, publications, funding and Special Programs.

The Riverways Program provides tools to help local communities and groups:

- ***Protect and restore water quality***
- ***Protect healthy stream flows***
- ***Protect land along rivers and streams***
- ***Improve habitat for wildlife and fish in river corridors***
- ***Promote public access to and along rivers and streams consistent with resource protection***

www.massriverways.org Department of Fish and Game, 251 Causeway Street, suite 400, Boston 02114 617-626-1540

Ipswich River

The Riverways Program promotes ecologically healthy rivers and streams by engaging strong community support and leadership throughout Massachusetts. Riverways' small efficient staff is devoted to establishing and nurturing public-private partnerships and providing necessary services and tools in communities across the Commonwealth. Riverways has demonstrated that a small expenditure of state dollars fuels volunteer commitment and in-kind services and attracts funding from non-state sources.

The Riverways Program was established in 1987 with the realization that protecting and restoring more than 10,000 miles of rivers and streams and adjacent lands in the Commonwealth could not (and should not) be achieved by state government acting alone.

To fulfill its mission, Riverways responds to local conditions and local needs as our resources allow. Demand for assistance remains steady and despite diminishing resources to provide tools and services, the staff has strived to meet commitments to partners by adapting our programs and utilizing our existing staff to respond to current conditions.

Taunton River at Titicut

South River, Conway

The great thing about Riverways is that the state gets out so much more than they put in. Here in the Neponset Valley, Riverways invested in a small group of volunteers during 1994, and years later there are more than 150 volunteers working on the river every month, supported by more than 1000 private donors, and together we've restored 90 miles of stream to swimmable quality. Riverways is like the push without which the giant snowball would never get started. Ian Cooke, Executive Director, Neponset River Watershed Association

RIFLS: River Instream Flow Steward: *Restoring natural flow*

Program Overview

Many of our streams are drying up, destroying critical aquatic habitats, and for many years concerned citizens and decision makers have reported frustration in their attempts to prevent further degradation of stream flow due to a lack of comprehensive data.

The River Instream Flow Stewards program (RIFLS) provides the technical assistance necessary for volunteer groups to collect high quality stream flow data, and establishes a process for groups to use the data in cooperation with local and state officials to make more informed management decisions that maintain and restore more natural flow regimes.

Volunteers from First Herring Brook Watershed Initiative measuring stream flow on the First Herring Brook in Scituate

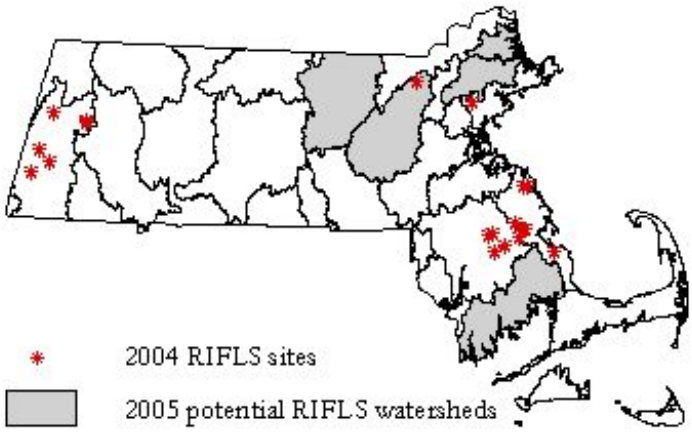
Accomplishments

In 2004, Riverways added an additional service to the RIFLS program by providing training in cooperation with the U.S. Geological Survey for volunteers to learn how to use velocity meters independently to measure stream flow and maintain the high quality of their stream flow data.

In addition, Riverways' RIFLS program continued to fill the stream flow data gaps through the following activities:

- Continuing technical assistance to an existing network of 12 sites and 26 volunteers
- Establishing staff gages for stream flow monitoring on 8 additional rivers; training 14 volunteers to record stream flow measurements; training 6 additional volunteers to provide technical assistance for staff gage calibration
- Receiving a grant from the Massachusetts Environmental Trust for $72,350 to increase the capacity of the program in 2005
- Maintaining the stream flow database, which now has 2,366 daily stream flow measurements on 20 rivers by 40 volunteers
- Providing relevant stream flow information to state and federal agencies, municipalities, and local citizens to enable them to make informed water resources management decisions that protect adequate stream flows

Personally, my involvement as a RIFLS Flow Monitoring Volunteer keeps me in touch with the ever-changing natural world around me. Tracking the patterns of flow through the seasons and during major weather events fills out my understanding of the inter-relatedness of natural systems around me. In the community, the availability of freely shared flow data has had a fascinating effect on the local lake association and on local government. Permit granting authorities, like the Conservation Commission, the DEP and the Natural Heritage Program now have a baseline of year-round flow data to use in evaluating draw-downs and resource based project proposals. Local water resource stakeholders, now know how to read their own flow data to better manage their impact on rivers and streams. The old business addage applies here: "you get what you measure". In this case it is "awareness" and a "new-found tool" to help people "do the right thing". Shepley W. Evans, Director, The Housatonic Valley Association, President, Housatonic River Restoration, Inc.



Adopt-A-Stream: *Building partnerships within communities*

Program Overview

Adopt-A-Stream is one of Riverways chief outreach programs, serving rivers and river constituents statewide. Partnering with watershed associations, conservation commissions, municipal officials and other community groups, Adopt-A-Stream has jointly established more than 120 Stream Teams and supported their efforts to collect baseline data through Shoreline Surveys on rivers of local concern. Working with Adopt-A-Stream staff, Stream Teams have involved municipal officials, created local Action Plans, reported water quality problems, sponsored cleanups, planted buffers and provided paddler access points.

I want you to know how very helpful Riverways' Western Stream Team Organizer has been to the Westfield River Watershed Association and what a fantastic job we think she does. She provides technical assistance and information and she seems to know just what we need. It's so important for all of us to have a member of the Riverways staff in Western Massachusetts. Kathy Meyer, President, Westfield River Watershed Association

Sheffield Stream Team receives Stream Team award

Accomplishments

- Worked with over 50 groups, including 28 Stream Teams, to involve over 285 volunteers in 40 different communities in 18 watersheds.
- Funded by a competitive s. 319 grant (from the Environmental Protection Agency through the Department of Environmental Protection), Adopt-A-Stream established projects in Scituate and East Longmeadow to encourage streamside residents to implement best management practices for stormwater, and sponsored neighborhood focus groups and surveys in 2004 leading up to on-the-ground projects for 2005.
- Worked with the Taunton River Wild and Scenic Study Committee, to support action planning and implementation by eight Stream Teams who surveyed tributaries to the mainstem.
- Taunton River Stream Team action plans became an integral part of the Wild and Scenic Stewardship Plan that is in the process of being approved by the 10 watershed towns.
- Provided implementation support to Stream Teams and other groups on projects including: signage and stream awareness for 13 streams in Acton; tracking rare turtles in Chelmsford; stormdrain stenciling and awareness in towns in the upper Sudbury River; demonstration project on vegetative buffers; stormwater mitigation and habitat enhancement on the Housatonic in Great Barrington; and, as part of a larger project, in Lowell, restoring Alewife to the Concord.

Photo credit: George Riner

The **Acton Stream Team's Stream Sign Awareness Project** resulted in the installation of 26 signs along the roads of Acton, directing attention to the brooks running underneath. The project leveraged over $4,200 from local partners, including extensive in-kind services, and created better partnerships with local businesses and the town. While the official dedication ceremony for the project was not until September, many community members had already taken notice of the signs, including the town Selectmen who remarked, "As you are aware, most people do not know the names of the various streams in the town and the smaller crossings are often not even apparent to motorists…with these new signs, these resources are not only evident, they even have names. The Board is certain that this program has raised (and will continue to raise) the awareness level for everyone in the community."

I can't imagine southeastern Massachusetts without an active Adopt-A-Stream Program. The Riverways staff has helped our communities reconnect to a resource that is at the root of our local culture and heritage…our rivers and streams. Bill Napolitano, Southeastern Regional Planning and Economic Development (SRPEDD)

River Restore: *Reconnecting rivers and their communities*

Program Overview

Between 1999 and 2004, River Restore collaborated with dam owners, federal, state, local and nonprofit partners, to remove dams and restore fisheries habitat in the towns of Dalton, Plymouth and Becket. In addition to initiating both **River Continuity** and the **Environmental Risk Index**, River Restore staff have worked on holistic watershed projects, such as the Neponset River, where they have taken a comprehensive approach to restoring fish passage and instream habitat while developing a strategy to remediate contaminated sediment (including a special outreach project funded this year by the Massachusetts Environmental Trust).

Accomplishments

Neponset River Ecological Restoration and Environmental Cleanup

Riverways continues to take an ecosystem approach to restoring fish passage and riparian and instream habitat while developing a strategy to remediate contaminants in the lower Neponset River. In addition to serving as a liaison between state and federal agencies and the public on an ecological restoration study by the U.S. Army Corps of Engineers, Riverways also served as a cooperator on *Sediment Quality and Polychlorinated Biphenyls in the Lower Neponset River, Massachusetts, and Implications for Urban River Restoration*, a comprehensive survey of the quality of sediment, water column, and fish flesh of the lower Neponset River by the U.S. Geological Survey.

Riverways staff member Karen Pelto co-leads a walking tour of the Bake Tilestone-Hollingsworth Dams for residents of the lower Neponset River

Recognizing the public investments in greenways and ecological restoration, Riverways sponsored *Exploring Innovative and Cost-Effective Solutions to Contaminated Sediments to Achieve Ecological Restoration of the Lower Neponset River*, a workshop at the 20th Annual International Conference on Soils, Sediments, and Water at UMASS Amherst. Academic and industry leaders, provided insight on appropriate remedial options that might exist for Neponset River sediment, including a combination of dredging and containment through innovative technology.

These new data and approaches to restore and remediate the Neponset River offers a unique opportunity to work together with community groups at a critical step in the river's recovery. Riverways received funding from the Massachusetts Environmental Trust's *Environmental Education* grant program to implement the "Neponset River Environmental Literacy Project" by designing and conducting innovative public involvement activities that communicate the science of ecological restoration and contaminant remediation to community leaders and citizens within selected Boston neighborhoods and the Town of Milton.

We place a high value on our partnership with Riverways—a partnership that is helping to establish a scientific foundation for stream restoration across Massachusetts. Peter Weiskel, Ph.D., U.S. Geological Survey

Town Brook Restoration

Through a partnership to implement the "Town Brook Restoration at Brewster Gardens Project," Riverways is providing funding under the Coastal WEB Initiative of the Massachusetts Executive Office of Environmental Affairs. This project is a key phase of a larger local, state, and federal restoration effort on Town Brook and will increase tidal flushing to Town Brook to improve water quality, restore natural stream bottom, and improve the upstream passage of anadromous fish during normal high tides by altering the Water Street weir, removing 40 cubic yards of accumulated sediment, and creating instream, wetlands, and streambank habitat. In 2001, the Town of Plymouth upgraded the Newfield Street Fishway in collaboration with the Division of Marine Fisheries. In 2002, the Billington Street Dam was removed as a River Restore Coastal Pilot Project.

Riverways has been an invaluable partner on all of our Town Brook Herring Run restoration projects. From technical expertise and guidance to funding to overall project support they have always been there to help us complete projects and to take on new ones. Without Riverways our restoration efforts for Town Brook would not be possible. David Gould, Town of Plymouth, MA

Yokum Brook Restoration Project

As part of the Yokum Brook Restoration that includes dam removal, Riverways partnered in an education project with Trout Unlimited and the Becket-Washington Elementary School. With an *Environmental Education* grant from the U.S. Environmental Protection Agency, volunteers from the Taconic Chapter of Trout Unlimited assisted third grade students at the Becket-Washington Elementary School in raising 280 Atlantic salmon fry and releasing them into Yokum Brook downstream of the former Silk Mill Dam, which was removed in 2003. An educational videotape was produced that introduces the Atlantic Salmon Egg Rearing Program (ASERP) of the U.S. Fish and Wildlife Service, describes the role of dams in salmon decline and fishways and dam removal in salmon recovery, and captures student experiences raising salmon, exploring Yokum Brook, and learning about dam removal. The seasonal events in the life cycle of an Atlantic salmon and aquatic insects indicative of healthy stream habitats have also been creatively expressed in a professionally illustrated full-color classroom poster.

Photo credit: Jane Winn, 4Winns Productions

Caleb Slater of the Division of Fisheries and Wildlife stocks Atlantic salmon fry in Yokum Brook under the watchful eyes of third graders at the Becket-Washington Elementary School.

I was so overwhelmed with a sense of pride and satisfaction of a job well done with the children of Becket-Washington School…The development of the Salmon eggs and their life cycles was an example for these children in so many ways. They learned the necessity of clean free flowing water, of keeping a species alive…It also enriched their lives by means of expression…and taught these youngsters the value of a political voice. Karen Karlburg, Trout Unlimited, Taconic Chapter, Liaison to Becket Washington School

Federal Wild and Scenic Rivers

Program Overview

The Wild and Scenic Rivers Act established a national system to identify outstanding values and protect the free-flowing condition of rivers. According to Park Service personnel "protection of these outstanding rivers designated as Wild and Scenic can only occur with commitment from state and local partners." In Massachusetts, the Riverways Program has provided leadership in all three of our national study/designated rivers: the Westfield River, Sudbury/Assabet//Concord Rivers, and the Taunton Rivers. Riverways staff, representing the Commonwealth, participate with municipalities, environmental organizations, the National Park Service and other state and federal agencies on issues relating to National Wild and Scenic Studies and designated rivers.

Windsor Jambs Brook, Windsor

Accomplishments

- Worked with the Westfield River Wild and Scenic Advisory Committee to double the designated river miles. The newly designated areas include tributaries and a section of mainstem in four towns.
- Provided technical assistance in all aspects of the work to protect the outstandingly remarkable values of the Westfield River and facilitated the workings of the Advisory Committee.
- Provided technical assistance to the East Branch Trail Subcommittee of the Westfield River Wild and Scenic Advisory Committee.
- Facilitated the formation of Stream Team Action Plans, an integral part of the Taunton River Wild and Scenic Stewardship Plan and facilitated a Taunton River Wild and Scenic Small Grants Program to implement parts of the Stream Team Action Plans.
- Participated in the writing of the Taunton River Wild and Scenic Stewardship Plan.
- Provided technical assistance to the Taunton River Wild and Scenic Study Committee and led a meeting of experts to determine next steps for water quality and quantity studies.
- Established a Taunton River RIFLS Program in conjunction with a water quality monitoring program led by Bridgewater State for the Taunton River Study Committee.
- Contributed to the five year review and strategic planning process for Sudbury, Assabet and Concord Wild and Scenic River Stewardship Committee.

River Continuity: *Reconnecting habitat for fish and wildlife*

Program Overview

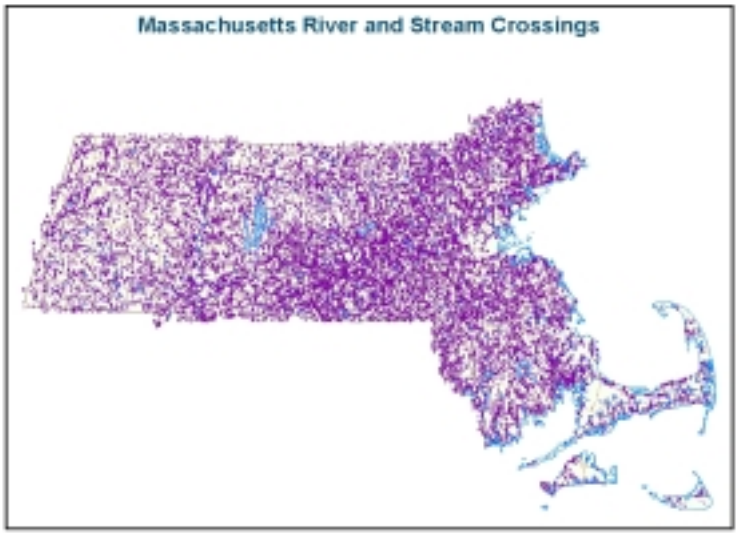
As a partner in the Massachusetts River Continuity Partnership, the Riverways Program is working to identify and remediate ineffective stream crossings in priority streams through volunteer training, targeted technical assistance, and demonstration projects. The Massachusetts River Continuity Partnership—a collaborative effort with University of Massachusetts - Extension and others—has developed protocols, standards, and techniques to identify and restore connectivity through stream crossings that are creating barriers to fish and wildlife passage.

The Taconic Chapter of Trout Unlimited is pleased to be a player on the River Continuity project team. The thousands of stream crossings found in watersheds here in Massachusetts have challenged our team; and we are up to the challenge. Improperly installed stream crossings affect the habitat of our native Eastern Brook Trout. Our "brookie" is indicative of a healthy aquatic ecosystem and watershed; discovering opportunities to remove stream barriers to fish and wildlife will help to ensure the brook trout's future and the overall health of our aquatic ecosystems. Paul Knauth, Taconic Trout Unlimited

Accomplishments

Volunteer training in the Taunton River Watershed

- Trained over 50 River Continuity volunteers who provided more than 850 volunteer hours surveying 665 road crossings in the Housatonic, Westfield and Taunton Watersheds to identify crossings that impede fish and wildlife passage. Partners in the surveys include Trout Unlimited, Housatonic Valley Association, The Nature Conservancy, Westfield River Watershed Association, Westfield River Wild and Scenic Committee, Taunton River Watershed Association, and Stream Teams.
- In partnership with the University of Massachusetts- Extension Service, developed assessment and prioritization tools for fish and wildlife passage at stream crossings.
- Worked in partnership with UMASS-Extension to develop and incorporate the River Continuity Partnership Stream Crossing standards in the federal wetland regulatory process for new stream crossings.
- Worked on pilot stream crossing restoration projects. In western Massachusetts particular attention has been paid to otherwise high-quality brook trout and Atlantic salmon streams. Partners include U.S. Fish and Wildlife Service, Natural Resources Conservation Service, municipal officials, Coastal Zone Management, watershed associations, and Westfield Wild and Scenic Committee.
- Designed and permitted an innovative retrofit of a culvert on Tower Brook in the Westfield River Watershed to eliminate a barrier to the movement of Atlantic salmon, brook trout, and other coldwater species.
- Developed partnerships with local, state, and federal groups to replace or retrofit two culverts on Bronson Brook, a tributary to the Westfield River, to improve passage for Atlantic salmon, brook trout, and other coldwater species.
- Developed partnerships with state and local agencies to restore a salt marsh and fish and wildlife passage on Labor In Vain Brook in the Taunton River Watershed.
- In partnership with local and federal agencies, provided support and technical review for the replacement of a fish passage barrier on the Mill River in Hatfield, a tributary to the Connecticut River.



There are 30,000 road and rail crossings over rivers and streams throughout Massachusetts

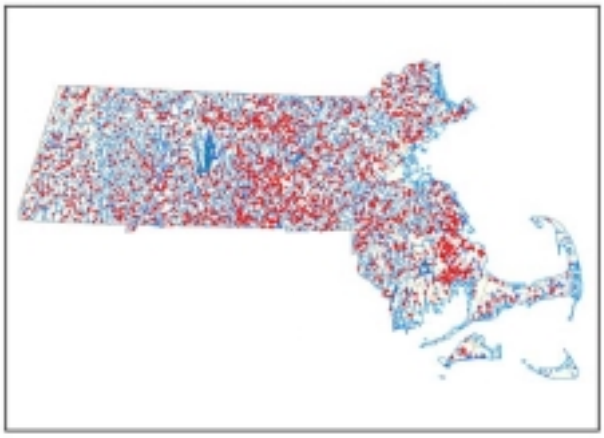
Environmental Risk Index: *Assessing the hazards and impacts of dams*

Program Overview

Riverways is developing a GIS-based model, the Environmental Risk Index, to (1) assess the environmental impact of dams on aquatic resources from their contributions to environmental degradation, and (2) characterize the environmental hazard to aquatic and other public resources from the uncontrolled breach or catastrophic failure of dams. A first in the nation, this process helps focus scarce public dollars on necessary and environmentally appropriate dam repair and dam removal projects. It will also provide the baseline information necessary for dam owners, municipalities, and grassroots conservation organizations to address dams in their watershed communities.

Riverways continues to collaborate with the U.S. Geological Survey to build a model to predict the potential toxicity of sediment impounded behind dams, called the Regional Impounded Sediment-Quality Assessment (RISQA). Field data on sediment quality has been collected at twelve impoundments across Massachusetts and indicators to rank potential toxicity have been developed. The Aqualand model developed by the University of Massachusetts Landscape Ecology Program is being used to determine watershed characteristics that may be predictive of sediment toxicity.

The potential toxicity of sediment impounded behind dams indicates a real need for the collection of current and credible data on the condition of dams, guidance on the sampling, assessment, and management of sediment impounded behind dams, and "multi-media" inspections at dams where impoundments are predicted to pose a high environmental hazard. For example, dam safety engineers could inspect the dam for current structural condition and hydraulic capacity, while water quality specialists could take sediment samples, and biologists could inventory aquatic resources.



3,000 Dams in Massachusetts

Accomplishments

- Completed a draft GIS-based model of the Environmental Impacts of Dams and applied it in 27 major watersheds throughout the state. Worked with federal and state partners including U.S. Geological Survey, University of Massachusetts, Department of Environmental Protection and The Nature Conservancy to improve the model outputs and interpretation.
- Initiated a program for volunteers and state partners to augment and improve the data quality of natural resources data for the Environmental Impacts Model.
- Worked with volunteers and partners in the Westfield and Neponset Watersheds to field assess the environmental impacts of dams.
- Provided on-site assessments of nine potential river restoration projects involving dams in seven different watersheds throughout the state.
- Provided in-depth field measurement, technical review, and conceptual restoration plans for three projects in the Chicopee, Taunton, and South Coastal Watersheds.
- Provided technical advice to communities and partners on 17 potential restoration projects involving dams throughout the state.

Of the 2,964 dams in the state's database, over half are privately owned and nearly a third are municipally owned. The majority of dams in the state (61%) are classified as "low hazard" by the Massachusetts Office of Dam Safety, meaning that they are located where failure or misoperation will cause no loss of life and *may* cause minimal property damage downstream. Regardless of size, low hazard dams currently require inspection of their condition only once every 10 years. Only 20% of low hazard dams have a reported condition in the state's database, leaving 1,449 dams where the condition is unknown. (*Watershed Scale Assessment of Environmental Impacts and Hazards of Dams*, prepared by Fuss and O'Neill, 2004 for the Riverways Program.)

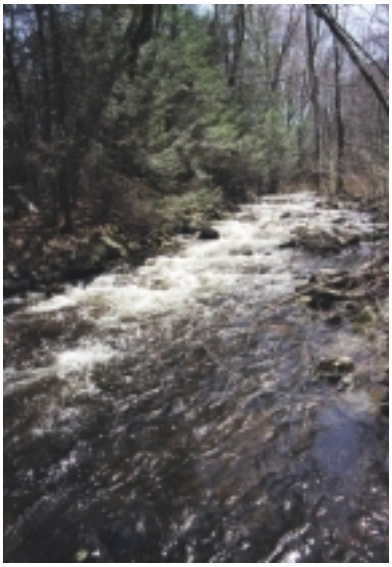
Technical Assistance: *Assisting communities and citizens*

Riverways' Technical Assistance Team provides assistance to citizens, municipalities and watershed groups to protect and restore river corridors, ecological systems, and facilitate community redevelopment. In 2004, expertise was provided by the following team members:

Rivers Advocate:

- Originated and coordinated a workshop on how land trusts can partner with water suppliers to protect source water lands at the 2004 Massachusetts Land Trust Conference
- Originated and coordinated the "Cold Water Awareness Campaign" (CWAC), an effort to increase the recognition of and protection for the more than two dozen native brook trout streams in the Blackstone Watershed at the local and state level
- Coordinated a project supporting innovative stormwater and wastewater management facilities to address infrastructure constraints and facilitate smart growth in the Blackstone Watershed
- Commented on Department of Environmental Protection's proposed changes to the Wetlands/Rivers Acts regulations, helping to maintain river and riparian land protection
- Co-presented a workshop on the functions and values of naturally-vegetated riparian areas for water quality and other benefits at the 2004 Massachusetts Association of Conservation Commissions state-wide conference
- Conducted beverage container tallies as part of river cleanup efforts, providing empirical evidence of the success of Massachusetts Bottle Bill in reducing streamside litter and the value of updating the law to cover non-deposit beverages
- Assisted over 200 municipal officials, citizens, and citizen groups in 30 watersheds on riverine and watershed protection and restoration issues and initiatives in the following areas
    - Riparian and other natural resource land protection
    - Stream bank stabilization
    - Water conservation techniques and strategies
    - Conservation restrictions
    - River recreation including trails, public access, canoeing
    - Dispute resolution over riparian land issues
    - Riverine habitat restoration

As chair of the Connecticut River Streambank Erosion Committee, the Rivers Advocate uses technical expertise and considerable skills as a mediator and advocate to weave the unifying thread through a diverse group of stakeholders, strengthening their ongoing efforts to protect prime farmland and riparian resources in the northern reach of the Connecticut River Watershed. Kimberly Noake MacPhee, P.G., Franklin Regional Council of Governments



Cold Spring Brook in Sutton, is determined by the Mass. Division of Fisheries and Wildlife to be an excellent wild trout stream in the Blackstone Watershed. Riverways Rivers Advocate originated and coordinated the "Cold Water Awareness Campaign" (CWAC), an effort to increase the recognition of and protection for the more than two dozen native brook trout streams in the Blackstone Watershed at the local and state level, and with a special focus on Cold Spring Brook.

The Riverways staff has been enormously helpful to me in my efforts to promote water conservation in my home town of Sharon, MA. They have provided me with statistics and information, referred me to useful web sites, let me know about relevant conferences, emailed me current newspaper articles, and introduced me to knowledgeable people. The Riverways staff has been indispensable in providing me with the tools and motivation I need to persevere. Paul Lauenstein, Neponset River Watershed Association (member, Board of Directors)

Fluvial Geomorphologist:

Riverways Fluvial Geomorphologist provides on-site assessments of projects in the context of how watershed-wide activities can impact instream health and what steps (if any) are necessary to help restore more healthy, natural processes to river and stream ecosystems. On selected projects, Riverways can give diagnostic help to see where problems exist on a subwatershed basis, find root causes, and determine solutions that will protect the ecological integrity of streams. Work in 2004 included the following:

- Provided on-site assessments of nine different potential river restoration projects involving dams in seven different watersheds throughout the state
- Provided in-depth field measurement, technical review, and conceptual restoration plans for three projects in the Chicopee, Taunton, and South Coastal Watersheds
- Provided technical advice to communities and partners on 17 different potential restoration projects involving dams throughout the state
- Instructed on geomorphic assessment techniques at two statewide stream restoration workshops

The Riverways Program provided direct support to our chapter by conducting an extensive stream survey upriver and downriver of a structure that has blocked fish passage and degraded stream habitat. Through the support of the Riverways program we have been able to develop a plan for restoring and improving coldwater fisheries habitat that has been greeted with strong support from local stakeholders, including historical and conservation commission in Belchertown and Ware, Massachusetts. We expect to have that project completed by the end of this summer. Paul G. Beaulieu, Pioneer Valley Trout Unlimited Chapter 276

Stream Ecologist:

Riverways Stream Ecologist is Riverways' expert on water quality issues. The ecologist serves as the Quality Assurance Quality Control officer for several watershed associations and serves on several technical committees. Work in 2004 included the following:

- Participated in The Nature Conservancy (TNC) Efroymson Planning Initiative to use TNC protocols to assess the Taunton River Watershed
- Participated in the development of the North Coastal Watersheds Five Year Action Plan, the Millers Watershed Five Year Plan, and the Millers River Watershed Regional Open Space Plan
- Partnered with Massachusetts Audubon: North Shore on a Department of Conservation and Recreation funded project to provide outreach, education and support materials on coarse woody debris' ecological benefits
- Reviewed and commented on the draft Water Assets Project for the pilot communities
- Reviewed and assessed over 20 draft NPDES permits in 11 watersheds and assessed national proposed policy for sewage blending

As a member of the Millers River Watershed Council, Otter River Stream Team, and a resident of Templeton, I am writing to express my appreciation for the efforts made locally by Riverways staff members. I have dealt with several of the Riverways staff and found them to be very professional and dedicated to their work and the environment. Specifically, I want to thank Riverways staff for helping citizens of Templeton to understand the MEPA process when trying to learn about the proposed Templeton landfill. Clearly Riverways advocates and enables citizens to get involved locally in protecting the environment by helping to overcome the technical and bureaucratic hurdles that can overwhelm the average citizen. John Henshaw, Millers River Watershed Council

Urban Rivers Program: *Reconnecting cities to their rivers*

Program Overview

The Urban Rivers Program works with communities to highlight the important role rivers and streams play in the effort to revitalize urban neighborhoods and communities. In 2004, the program sponsored a workshop that brought together 45 residents and city officials to develop a master plan for the North Nashua River to identify brownfield reuse, recreational opportunities and improved access. A River Master Plan and full color poster were produced for the City to help guide planning efforts along the river and augment funding requests. Fitchburg was subsequently awarded a Self-Help grant to implement a trail along the river, included in the plan. The River Master Plan was recently submitted for consideration for an award from the Boston Society of Landscape Architects.

Accomplishments

- Participated in both the EOEA Environmental Justice Working Group and the regional Environmental Justice Teams (Western, Central, Southeast, Northeast and Greater Boston)
- Served as a panel moderator for the Fall River Urban Rivers and their Neighborhoods Conference
- Assisted Groundwork Lawrence in their work to revitalize the Spicket River and Arlington Street neighborhood through educational talks, partnering on grant requests, event organizing and technical assistance in regards to state regulations
- Facilitated North Coastal Watershed meetings and partnerships

Participants at the Fitchburg Charrette

Segments of an article describing the charrette in *The Worcester Telegram & Gazette*, March 3, 2004:

'"The river is really where Fitchburg had its start," [Lisa] Wong, [Director of the Redevelopment Authority] said noting that industry and housing were situated downtown along the Nashua River centuries ago. "Everything was centered around the river," she said. To start to revive downtown, "it makes sense to start with the river…." [Mayor Dan H. Mylott touted] '"This is an effort to incorporate as many people as we can into the furtherance of the river. It really gives us a chance to decide how we want to move ahead with the rebirth of the river."'
'The Mayor echoed Ms. Wong's point that reviving the river could trigger economic development

Rendering from the North Nashua River Master Plan
Design by Crosby, Schlessinger, Smallridge, LL

Outreach and Education: *Serving constituencies with information and resources*

Riverways continues to produce ***NewsNotes***—a short, bimonthly newsletter—delivered electronically to provide more timely information about river issues and to save paper and postage. Each issue of ***NewsNotes*** highlights a river issue, provides extensive information on resources and grants for river protection/restoration and gives a brief update of current Riverways activities.

Riverways staff appreciates the opportunities to work with partners on river and habitat issues across the state. We recognize that by working together to protect the rivers, streams and adjacent lands, our partnerships are also protecting the unique character and livability of our communities. Protected and restored rivers and streams will bring tourists, anglers, hunters, birders and hikers to Massachusetts destinations. Healthy rivers will provide exceptional outdoor recreational opportunities close to home for Massachusetts residents, contributing to the high quality of life so essential for attracting and retaining top-notch employers and workers and for providing clean water for human health.

Just wanted to express gratitude once again for all the info you send our way. If you didn't, we'd miss a lot of it, and be a less informed, involved, and effective organization. Eileen Fielding, Hoosic River Watershed Association

2004 Workshops and Presentations by Riverways staff

- New England Association of Environmental Biologists Annual Meeting, *Housatonic River Target Fish Community* – Margaret Kearns
- Rhode Island Rivers Council Watershed Summit, *River Instream Flow Stewards Overview* – Margaret Kearns
- Massachusetts Association of Conservation Commissions' Annual Environmental Conference, *The Science of Vegetated Buffers as a Water Quality Technique* – Russ Cohen
- Westfield River Symposium River Continuity, *Why Did the Fish Cross the Road?* – Brian Graber
- Trout Unlimited State Council Meeting River Continuity, *Partnership for Restoration* – Brian Graber
- *Watershed-Scale Assessment of Environmental Impacts and Hazards of Dams: Massachusetts River Restore Program* presented at: the Vermont Dams Task Force meeting (Karen Pelto and Brian Graber); the Association of State Dam Safety Officials Conference; US Society on Dams Conference – Brian Graber
- Rivers and Streams: Current Status and Future Initiatives Panel Discussion at Tufts, *Taking a (long-term self-sustaining multidisciplinary) Watershed Approach to Stream Restoration* – Brian Graber
- Co-Instructor at the River Morphology and Survey Workshop sponsored by New England Environmental – Brian Graber
- Co-Instructor at the Stream Restoration Workshop sponsored by Vanasse Hanglin Brustlin – Brian Graber
- U.S. Environmental Protection Agency, Region 7 Tenth Regional Wetlands and Water Resources Meeting: New Protection Challenges for Unprotected Watersheds, *Watershed-Scale Assessment of Environmental Impacts and Hazards of Dams: Massachusetts River Restore Program* – Karen Pelto
- Massachusetts Association of Conservation Commissions Annual Meeting, *Watershed-Scale Assessment of Barriers to River Health: Massachusetts River Restore Program* – Karen Pelto
- Rhode Island Rivers Council Watershed Summit, *River Restore and Aquatic Habitat Restoration* – Karen Pelto
- Hampshire College Natural Science Symposium, *Community-Based Restoration and Stewardship of Massachusetts River* – Karen Pelto
- EWRI Dam Removal: Lessons Learned, *Engaging Communities to Visualize Alternative Futures for Rivers: Conceptual Renderings and Charrettes* and *Aquatic Habitat Restoration: Regulation and Policy in Massachusetts* – Karen Pelto
- EWRI Dam Removal: Lessons Learned, *Integrating Community and Social Values into River Restoration* – Karen Pelto
- UMASS 20th Annual International Conference on Soils, Sediments, and Water, *Exploring Innovative and Cost-Effective Solutions to Contaminated Sediments to Achieve Ecological Restoration of the Lower Neponset River* – Karen Pelto
- UMASS Water Resources Research Center 2nd Annual Conference Emerging Issues in Water Resources in the Northeast, *From Site to Statute: Policy and Regulatory Response to Dam Removal* – Karen Pelto
- UMASS Graduate Seminar in Natural Resources Conflicts, *Integrating Community and Social Values into River Restoration* – Karen Pelto
- Waquoit Bay National Estuarine Research Reserve (WBNERR) Coastal Restoration Workshop, *Navigating Statutes and Regulations to Restore Aquatic Resources in Massachusetts* – Karen Pelto
- Rivers and Streams: Current Status and Future Initiatives Panel Discussion at Tufts: *Restoring Rivers in Altered States: Key Issues related to Dam Removals in Urban Environments* – Karen Pelto
- Massachusetts Corporate Wetlands Restoration Partnership Seminar, *River Restoration in Massachusetts: CWRP Accomplishments and Opportunities* – Karen Pelto
- Raingarden presentation for the Massachusetts Audubon Society Broadmeadow Brook Wildlife Sanctuary – Rachel Calabro
- MGPA Introductory workshops for Nashua River Association lecture series, Templeton, Dunstable – Cindy Delpapa
- Food Project Urban Agricultural Conference: *Role of Government Agencies* – Cindy Delpapa
- Neponset River Festival: presentations of fish printing, and the Neponset River project – Cindy Delpapa and Karen Pelto
- Moderator at the Fall River Urban River Conference – Cindy Delpapa
- Westfield River Watershed Association Annual Meeting: *Riverways in the Westfield River Watershed* – Joan Kimball

RIVERWAYS

Riverways Program Staff

Operational Funding

Rachel Calabro
Adopt-A-Stream Coordinator

Russ Cohen
Rivers Advocate

Cindy Delpapa
Steam Ecologist/Urban Rivers Coordinator

Eileen Goldberg
Programs Administrator/Grants Administrator

Margaret Kearns
Watershed Ecologist/RIFLS

Joan Kimball
Director

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Amy Singler
Stream Team Organizer

Special Funding

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Erin Colupy
RIFLS Technical Assistant

Brian Graber
Fluvial Geomorphologist

Chris Leuchtenburg
Data Researcher

Gabrielle Stebbins
RIFLS Technical Assistant

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Commonwealth of Massachusetts; Mitt Romney, Governor
Kerry Healey, Lieutenant Governor
EOEA; Ellen Roy Herzfelder, Secretary
Department of Fish and Game; David Peters, Commissioner

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Photo by Tim Watts

Riverways is my bridge between an often confusing regulatory environment and the too often abused and neglected environment of our rivers. Riverways is a bridge built of caring people who enable others to make a difference. It's very rare when a public program and more importantly public employees inspire the public to make a difference. Riverways does just that. Thank you Riverways. Tim Watts, Taunton River Advocate, Matfield Stream Team

RIVERWAYS

Program Highlights of 2004

RIFLS – volunteer stream flow data collection
- Doubled the number of volunteers and streams in the first-in-the-nation *River Instream Flow Stewards* (*RIFLS) Program* and maintained the stream flow database with 2,366 measurements from over 40 volunteers

Adopt-A-Stream – watershed surveys & restoration
- Worked with over 28 *Adopt-A-Stream* Teams and 22 other groups to involve over 164 volunteers in 40 different communities in 18 watersheds in surveys, education, public access and restoration projects

River Continuity – fish passage through culverts
- Worked with partners, to train over 50 volunteers who surveyed 665 road crossings in the Housatonic, Westfield and Taunton Watersheds

River Continuity – pilot culvert designs
- Worked with partners to design innovative culvert retrofits that promote fish and wildlife passage in and along Tower Brook in the Westfield River Watershed

Fitchburg *Rivers* Charrette/River Revitalization Plan
- Sponsored workshop for 45 residents and city officials to develop a master plan for the North Nashua River to identify brownfield reuse, recreational opportunities and access.
- Using concepts from master plan, Fitchburg received a Self Help grant to create a trail along the river. The Fitchburg River Master Plan has been submitted to the Boston Society of Landscape Architects for a planning award.

Environmental Literacy for the Neponset River
- Building environmental literacy and community involvement in decision-making for ecological restoration and remediation of PCBs in the lower Neponset River

Technologies for Pollution Remediation
- Sponsored a workshop at the *20th Annual International Conference on Soils, Sediments, and Water* (UMass Amherst) to explore available and emerging technologies for remediating contaminated sediment in the lower Neponset River

Innovative Stormwater and Wastewater Management Facilities in the Blackstone Watershed
- Coordinated a project supporting innovative stormwater and wastewater management facilities to address infrastructure constraints and facilitate smart growth in the Blackstone Watershed

Environmental Risk Index – prioritizing failing dams
- National model for evaluating natural resource impacts of dams and potential contaminant levels in sediment impounded behind dams in the state's 27 major watersheds

Volunteer GIS Ground-truthing
- Trained volunteers, in partnership with watershed associations, to "ground truth" GIS dam and road crossing data in the Neponset and Westfield River Watersheds

Technical Assistance to Communities
- Assisted over 200 municipal officials, citizens, and citizen groups in 30 watersheds on riverine and watershed protection and restoration issues and initiatives

River Restoration Projects
- Provided in-depth field measurement, technical review, and conceptual restoration plans for 3 projects in the Chicopee, Taunton, and South Coastal Watersheds
- Advised and facilitated 17 restoration projects involving dams and provided watershed assessment technical assistance in 8 watersheds

Social Marketing for River Stewardship
- *Adopt-A-Stream* sponsored focus groups, and surveys in the Connecticut and South Coastal Watershed to determine how to broaden wider acceptance of storm water best management practices to benefit rivers

Federal Wild and Scenic Rivers
- Worked with Wild and Scenic Committee to double the size of the Westfield River Wild and Scenic designation
- Facilitated *Stream Team* Action Plans, an integral part of the Taunton River Wild and Scenic Stewardship Plan

Technical Assistance to Partners
- Provided grant writing, project review, and strategic planning assistance to partners, including The Nature Conservancy, Massachusetts Instream Flow Task Force, USGS, Trout Unlimited, Bridgewater State Water Access Lab, UMass etc.

Project Reviews
- Provided technical assistance, review and comments on Watershed Action Plans, Water Management Plans, NPDES Permits, MEPA documents, EOEA's new Water Policy, etc.

Riverways Newsnotes – electronic newsletter
- Provided information on major river issues including an extensive resources and grants section to assist river advocates and constituents

Conferences and Workshops
- Originated, facilitated and/or presented innovative techniques for river restoration at statewide conferences

Dam Removal Education Project
- Coordinated implementation of an EPA Environmental Education grant at the Becket-Washington Elementary School as part of the removal of Silk Mill Dam and restoration of Yokum Brook